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Contribution to the knowledge of the *Dicronychus* BRULLÉ 1832 (Coleoptera, Elateridae, Cardiophorinae) fauna of Turkey

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A b s t r a c t : This study is based on the material of *Dicronychus* BRULLÉ 1832 (Coleoptera, Elateridae, Cardiophorinae) collected from different localities in Turkey between 1967 and 2004. In this study totally seven species belonging to *Dicronychus* were recorded in Turkey. For each species new distributional localities were also reported and given with attached maps.

K e y w o r d s : Coleoptera, Elateridae, Cardiophorinae, *Dicronychus*, Fauna, Turkey.

Introduction

Elateridae fauna of Turkey is quite rich. There are some descriptions and faunistical records on Turkish elaterids in the entomological literature. In this family, *Dicronychus* is quite rich genus and the studies of SAHLBERG 1912-1913, GUGLIELMI & PLATIA 1985, LODOS 1998, GULPERCIN & TEZCAN 2006, 2009, KESDEK et al. 2006, LÖBL & SMETANA 2007, MERTLIK & PLATIA 2008, UZUM et al. 2009, VARLI et al. 2010 and ABACIGIL et al. 2012 have great importance. Recently, the distributional catalogue of Turkish Elateridae (Coleoptera) fauna has been published (GULPERCIN & TEZCAN 2010). In this publication, a total of 23 species belonging to *Dicronychus* have been listed with their distributional data.

Data on some material of *Dicronychus* have been collected but have not been published up to now within the research projects by the researchers of Department of Plant Protection, Faculty of Agriculture, University of Ege, Izmir, Turkey during 1967-2004 have been given in this paper. They were deposited in the collection of Lodos Entomological Museum Turkey (LEMT) of same department. The aim of the present study is to contribute to the knowledge of the *Dicronychus* fauna of the Turkey by evaluating the material deposited in this museum.

Provinces of the collected specimens are given in alphabetical order in the following list. Material have been determined by C.M.F. Hayek (Austria), J. Chassain (France), G. Platia (Italy), R. Preiss (England), N. Lodos and N. Gulpercin (Turkey). Classification and nomenclature of the *Dicronychus* suggested by LÖBL & SMETANA (2007) have been followed in this study.

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Results

In this study, seven species belonging to *Dicronychus* are recorded. Recent distribution of each species in Turkey were also given with maps within the text.

Family E l a t e r i d a e LEACH 1815

Subfamily C a r d i o p h o r i n a e CANDÉZE 1860

Genus *D i c r o n y c h u s* BRULLÉ 1832

Dicronychus adanensis (PIC 1908)

M a t e r i a l e x a m i n e d : Mersin: Silifke, 22.IV.1986, *Pinus* sp., 1 ex., totally 1 specimen.

D i s t r i b u t i o n i n T u r k e y : Turkey (LODOS 1998; LÖBL & SMETANA 2007; MERTLIK & PLATIA 2008); Adana (SAHLBERG 1912-1913); Tokat (Zile) (KABALAK & SERT 2011). Distributional map of *D. adanensis* in Turkey is given on Fig. 1.

Dicronychus cinereus (HERBST 1784)

M a t e r i a l e x a m i n e d : Ankara: Temelli, 28.VI.1976, 1 ex.; Bursa: Central province, 09.V.1973, *Prunus* sp., 1 ex.; Denizli: Honaz, 10.V.1972, *Rubus* sp., 1 ex.; Isparta: Gölcük, 11.VI.2003, 1 ex.; İzmir: Kemalpaşa-Armutlu, 27.IV.2004, *Prunus avium* LINNAEUS 1755, 1 ex., *Rubus* sp., 3 exs., Kemalpaşa-Yukarıkızılca, 11.VI.2003, *Juglans regia* LINNAEUS 1753, 2 exs., *Platanus* sp., 1 ex., Ödemiş-Birgi, 01.VI.2004, *Prunus cerasus* LINNAEUS 1753, 2 exs., Ödemiş-Bozdağ, 24.V.1972, *Castanea sativa* MILLER 1768, 1 ex., *Crataegus* sp., 1 ex., 26.V.1972, *C. sativa*, 1 ex., 14.V.1973, *Pyrus elaeagrifolia* PALLAS 1793, 1 ex., 01.VII.2001, pitfall, 3 exs., 28.V.2003, 1 ex., 01.VI.2004, *Cydonia oblonga* MILLER 1768, 1 ex., Ödemiş-Hacıhasanlı, 01.VI.2004, *P. cerasus*, 2 exs., Ödemiş-Yılanlı (1092 m), 01.VI.2004, *C. sativa*, 1 ex., *P. avium*, 1 ex.; Kastamonu: Tosya, 08.VI.1980, *Quercus* sp., 5 exs.; Mersin: Güzeloluk, 30.V.1984, *Quercus* sp., 1 ex.; Sinop: Central province, 06.VI.1980, weeds, 1 ex., totally 33 specimens.

D i s t r i b u t i o n i n T u r k e y : Turkey (LÖBL & SMETANA 2007; MERTLIK & PLATIA 2008); İzmir [Selçuk (Efes)] [as *Cardiophorus cinereus suturalis* ESCHSCHOLTZ 1829] (SAHLBERG 1912-1913); Mersin (Çamlıyayla) (GUGLIELMI & PLATIA 1985); İzmir (GULPERCIN & TEZCAN 2006); İzmir [Kemalpaşa (Armutlu, Yukarıkızılca), Ödemiş (Bozdağ, Hacıhasanlı)] (GULPERCIN & TEZCAN 2009); İzmir (Kemalpaşa) (UZUM et al. 2009); Balıkesir, Çanakkale (VARLI et al. 2010); Amasya (Hamamözü), Çorum (Boğazkale, İskilip), Tokat (Zile) (KABALAK & SERT 2011). Distributional map of *D. cinereus* in Turkey is given on Fig. 2.

Dicronychus equiseti (HERBST 1784)

M a t e r i a l e x a m i n e d : Çanakkale: Çan, 22.IV.1975, weeds, 4 exs.; Manisa: Demirci, 13.IV.1973, *Prunus americana* MARSH, 1785, 2 exs., *P. avium*, 2 exs.; Sakarya: Adapazarı, 16.V.1973, *Corylus* sp., 1 ex.; Zonguldak: Ereğli, 25.V.1980, *Rubus* sp. 1 ex., totally 10 specimens.

D i s t r i b u t i o n i n T u r k e y : Turkey (WINKLER 1924-1932; SCHENKLING 1925-1927; LESEIGNEUR, 1970; GUGLIELMI & PLATIA 1985; [as *Cardiophorus equiseti* HERBST 1784] LODOS 1998; LÖBL & SMETANA 2007; MERTLIK & PLATIA 2008; ANONYMOUS 2009); Sinop (Boyabat) (KABALAK & SERT 2011). Distributional map of *D. equiseti* in Turkey is given on Fig. 3.

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***Dicronychus incanus* (ERICHSON 1840)**

Material examined: İzmir: Ödemiş-Bozdağ, 24.V.1978, *Pinus* sp., 1 ex.; Kilis: 04.VIII.1985, weeds, 1 ex.; Mersin: Anamur, 19.IV.1985, aerial collector, 1 ex., totally 3 specimens.

Distribution in Turkey: Bitlis (Tatvan-Pass); Diyarbakır (Korkha) (GUGLIELMI & PLATIA 1985). Distributional map of *D. incanus* in Turkey is given on Fig. 4.

***Dicronychus rubripes* (GERMAR 1824)**

Material examined: Adana: Karaisalı, 02.VI.1984, *Quercus* sp., 1 ex.; Bilecik: Pazaryeri, 07.VI.1973, *Vicia* sp., 1 ex.; Isparta: Eğirdir, 27.IV.1972, *Quercus* sp., 1 ex., Gökdere, 27.IV.1972, *Crataegus* sp., 2 exs.; İzmir: Çeşme, 13.V.1984, weeds, 1 ex., Ödemiş-Bozdağ, 24.V.1978, *Pinus* sp., 3 exs., *Quercus* sp., 1 ex., *Rosa* sp., 2 exs., 19.VI.2003, *Rubus* sp., 1 ex., Ödemiş-Bozdağ-Büyük Çavdar, 19.VI.2003, *Urtica* sp., 1 ex.; Kütahya: Domaniç, 21.V.1971, *Crataegus* sp., 1 ex.; Manisa: Sultanyaylası, 29.V.1970, *Rhus* sp., 1 ex.; Zonguldak: Ereğli, 25.V.1980, *Rubus* sp., 1 ex., totally 17 specimens.

Distribution in Turkey: Turkey (LÖBL & SMETANA 2007; MERTLIK & PLATIA 2008); Ankara (Güdül, Tahtaörencik-Sorgun Plateau Road) (KABALAK & SERT 2005); İzmir (Ödemiş-Bozdağ) (GULPERCIN & TEZCAN 2009); Balıkesir, Çanakkale (VARLI et al. 2010). Distributional map of *D. rubripes* in Turkey is given on Fig. 5.

***Dicronychus senaci* (DESBROCHERS DES LOGES 1869)**

Material examined: Balıkesir: Erdek, 23.IV.1973, weeds, 1 ex., 23.IV.1975, *Crataegus* sp., 3 exs., weeds, 1 ex.; Bursa: Central province, 09.V.1973, 1 ex.; Çanakkale: Central province, IV.1967, 1 ex.; İzmir: Bayındır, 14.V.1973, weeds, 3 exs., Ödemiş, 24.IV.1973, *Populus* sp., 2 exs., 14.V.1973, *Ulmus* sp., 1 ex., *Vicia* sp., 1 ex., Ödemiş-Birgi, 07.VI.1972, *Quercus* sp., 1 ex., Ödemiş-Mursallı, 14.V.1970, weeds, 1 ex.; Karabük: Central province, 29.V.1980, *Malus domestica* BORKH. 1803, 1 ex.; Kırklareli: Lüleburgaz, 09.VI.1974, *Prunus persica* LINNAEUS 1753, 2 exs.; Kocaeli: İzmit, 25.IV.1975, weeds, 1 ex.; Manisa: Kula, 13.IV.1975, under stone, 1 ex., Sultanyaylası, 29.V.1970, *Rhus* sp., 1 ex.; Sakarya: Akyazı, 26.IV.1975, *Platanus* sp., 1 ex., totally 23 specimens.

Distribution in Turkey: Turkey (LÖBL & SMETANA 2007; MERTLIK & PLATIA 2008); Çanakkale (Truva) (GUGLIELMI & PLATIA 1985); Balıkesir, Çanakkale (VARLI et al. 2010). Distributional map of *D. senaci* in Turkey is given on Fig. 6.

***Dicronychus variatus* (DESBROCHERS DES LOGES 1875)**

Material examined: Balıkesir: Erdek, 20.V.1973, *Olea europaea* LINNAEUS 1758, 3 exs., 20.VI.1973, *O. europaea*, 1 ex.; Bursa: Central province, 09.V.1975, *P. persica*, 1 ex.; İzmir: Ödemiş-Birgi-Hacıhasanlı, 01.VI.2004, *C. oblonga*, 1 ex., Ödemiş-Bozdağ, 24.V.1978, *Crataegus* sp., 1 ex., *Pinus* sp., 1 ex., *Rosa* sp., 1 ex., 09.VI.2001, pitfall, 2 exs., 01.VII.2001, pitfall, 2 exs., Selçuk-Şirince, 21.V.2003, *O. europaea*, 1 ex.; Muğla: Dalaman, 04.V.1972, *Medicago* sp., 1 ex.; Niğde: Ulukışla, 29.IV.1979, *Populus* sp., 1 ex.; Osmaniye: Almanpınarı, 08.VI.1972, *Quercus* sp., 1 ex.; Antalya: Sinan, 19.V.1986, *P. armeniaca*, 1 ex., totally 18 specimens.

Distribution in Turkey: Turkey (LÖBL & SMETANA 2007; MERTLIK & PLATIA 2008); Konya (Sertavul Pass) (GUGLIELMI & PLATIA 1985). Distributional map of *D. variatus* in Turkey is given on Fig. 7.

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Fig. 1: Distribution of *Dicronychus adanensis* (PIC 1908) in Turkey.

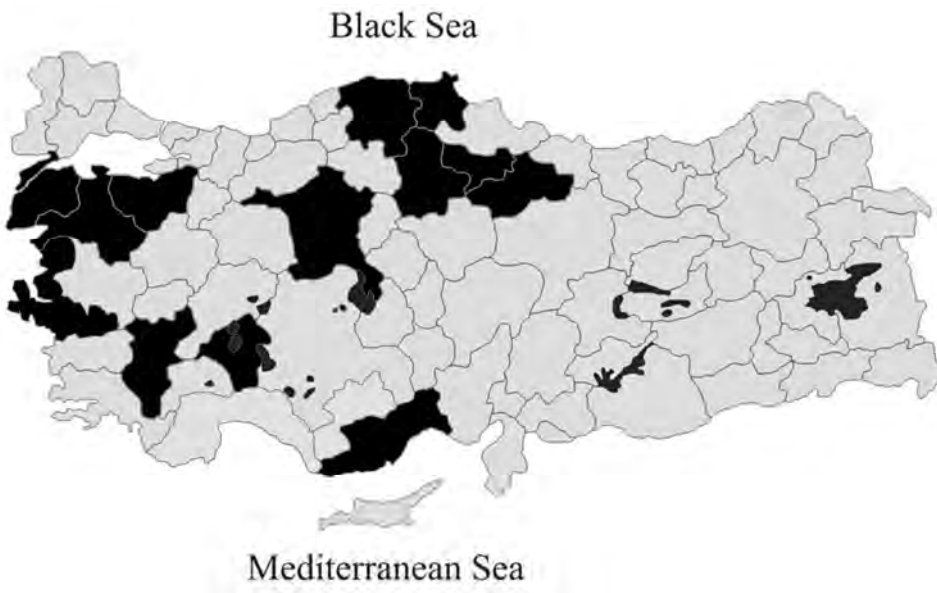

Fig. 2: Distribution of *Dicronychus cinereus* (HERBST 1784) in Turkey.

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Fig. 3: Distribution of *Dicronychus equiseti* (HERBST 1784) in Turkey.

Fig. 4: Distribution of *Dicronychus incanus* (ERICHSON 1840) in Turkey.

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Fig. 5: Distribution of *Dicronychus rubripes* (GERMAR 1824) in Turkey.

Fig. 6: Distribution of *Dicronychus senaci* (DESBROCHERS DES LOGES 1869) in Turkey.

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Fig. 7: Distribution of *Dicronychus variatus* (DESBROCHERS DES LOGES 1875) in Turkey.

Zusammenfassung

Vorliegende Arbeit behandelt *Dicronychus*-Material (Elateridae), das an verschiedenen Orten in der Türkei im Zeitraum 1967 bis 2004 aufgesammelt wurde. Sieben Arten aus der Gattung konnten nachgewiesen werden, die Funddaten nebst Verbreitungsangaben für die Türkei wurden festgehalten.

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